



This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A process ~~Process~~ for the preparation of a bis(perfluoroalkyl)phosphinic acid or salt ~~acids or salts thereof~~ comprising at least the following process steps:
 - a) reaction of at least one difluorotris(perfluoroalkyl)phosphorane or at least one trifluorobis(perfluoroalkyl)phosphorane with hydrogen fluoride in a suitable reaction medium, and
 - b) heating of the reaction mixture obtained in a).
2. (Currently amended) A process ~~Process~~ for the preparation of a bis(perfluoroalkyl)phosphinic acid or salt ~~acids or salts thereof~~ according to Claim 1, ~~characterised in that~~ wherein the salts are prepared by subsequent neutralisation.
3. (Currently amended) A process ~~Process~~ according to Claim 1, ~~characterised in that~~ wherein the difluorotris(perfluoroalkyl)phosphorane or trifluorobis(perfluoroalkyl)phosphorane employed is a compound of the general formula I
$$(C_nF_{2n+1})_mPF_{5-m}$$

I

in which $1 \leq n \leq 8$, preferably $1 \leq n \leq 4$, and m in each case = 2 or 3.
4. (Currently amended) A process ~~Process~~ according to Claim 1, ~~characterised in that~~ wherein the difluorotris(perfluoroalkyl)phosphorane ~~employed is a compound selected from the group consisting of~~ difluorotris(pentafluoroethyl)phosphorane, difluorotris(nonafluorobutyl)phosphorane ~~and~~ or difluorotris(n-heptafluoropropyl)phosphorane.
5. (Currently amended) A process ~~Process~~ according to Claim 1, ~~characterised in that~~ wherein the trifluorobis(perfluoroalkyl)phosphorane compound ~~employed~~ is trifluorobis(n-

nonafluorobutyl)phosphorane.

6. (Currently amended) A process ~~Process~~ according to Claim 1, ~~characterised in that~~ wherein the temperature during the heating in process step b) is from room temperature to 150°C, ~~preferably from 100°C to 145°C, particularly preferably from 135 to 140°C.~~

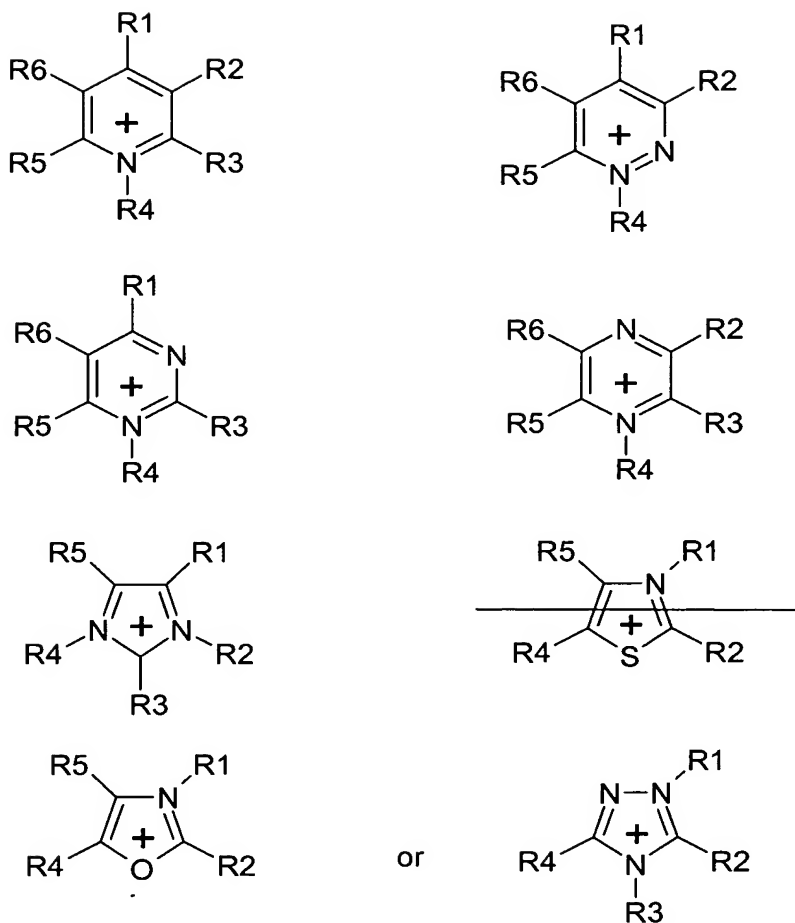
~~7. (Currently amended) A process ~~Process~~ according to Claim 1, ~~characterised in that~~ wherein the duration of the heating in process step b) is from 1 to 150 hours, ~~preferably from 10 to 25 hours, particularly preferably from 18 to 22 hours.~~~~

8. (Currently amended) A process ~~Process~~ according to Claim 1, ~~characterised in that~~ wherein the reaction medium is water or a water-based mixture.

9. (Currently amended) A process ~~Process~~ according to Claim 2, ~~characterised in that~~ wherein bases, ~~preferably hydroxides, oxides, hydrides, amides, carbonates, phosphines or amines,~~ are used to prepare the salts.

10. (Currently amended) A salt ~~Salts of a bis(perfluoroalkyl)phosphinic acids acid~~ selected from the group consisting of that is partially alkylated and or peralkylated ammonium, phosphonium, sulfonium, pyridinium, pyridazinium, pyrimidinium, pyrazinium, imidazolium, pyrazolium, ~~thiazolium,~~ oxazolium and or triazolium salts.

11. (Currently amended) ~~Salts of~~ A bis(perfluoroalkyl)phosphinic acids acid according to Claim 10, having a cation ~~selected from the group consisting of that is~~



where R^1 to R^5 are identical or different, are optionally bonded directly to one another by a single or double bond and are each, individually or together, defined as follows:

- H,
- halogen, where the halogens are not bonded directly to N,
- an alkyl radical (C_1 to C_8), which may be partially or completely substituted by further groups, preferably
 F , Cl , $N(C_nF_{(2n+1-x)}H_x)_2$, $O(C_nF_{(2n+1-x)}H_x)$, $SO_2(C_nF_{(2n+1-x)}H_x)$,
 $C_nF_{(2n+1-x)}H_x$, where $1 < n < 6$ and $0 < x \leq 2n+1$.

12. (Currently Amended) ~~Use of the salts~~ An ionic liquid comprising a
bis(perfluoroalkyl)phosphinic acids acid according to Claim 10 ~~as ionic liquids.~~

13. (Currently Amended) A phase-transfer catalyst or surfactant ~~Use of the salts comprising a salt of a bis(perfluoroalkyl)phosphinic acids acid~~ according to Claim 10 ~~as phase-transfer catalyst or surfactants.~~
14. (New) A process according to Claim 9, wherein said bases is a hydroxide, oxide, hydride, amide, carbonate, phosphine or amine.
15. (New) A process according to Claim 7, wherein the duration of the heating in process step b) is from 10 to 25 hours.
16. (New) A process according to Claim 7, wherein the duration of the heating in process step b) is from 18 to 22 hours.
17. (New) A process according to Claim 6, wherein the temperature during the heating in process step b) is from 100°C to 145°C.
18. (New) A process according to Claim 6, wherein the temperature during the heating in process step b) is from 135 to 140°C.